



568.1D1.TXT

SEQUENCE LISTING

<110> Madison, Edwin L

<120> TISSUE TYPE PLASMINOGEN ACTIVATOR (t-PA)  
VARIANTS: COMPOSITIONS AND METHODS OF USE

<130> TSRI 568.1D1

<140> US 10/705,633

<141> 2003-11-10

<150> US 09/600,985

<151> 2000-11-13

<150> PCT/US97/20226

<151> 1997-11-12

<150> US 60/030,655

<151> 1996-11-12

<160> 10

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 527

<212> PRT

<213> Homo sapiens

<400> 1

Ser	Tyr	Gln	Val	Ile	Cys	Arg	Asp	Glu	Lys	Thr	Gln	Met	Ile	Tyr	Gln	
1				5					10					15		
Gln	His	Gln	Ser	Trp	Leu	Arg	Pro	Val	Leu	Arg	Ser	Asn	Arg	Val	Glu	
			20					25					30			
Tyr	Cys	Trp	Cys	Asn	Ser	Gly	Arg	Ala	Gln	Cys	His	Ser	Val	Pro	Val	
		35				40					45					
Lys	Ser	Cys	Ser	Glu	Pro	Arg	Cys	Phe	Asn	Gly	Gly	Thr	Cys	Gln	Gln	
	50					55				60						
Ala	Leu	Tyr	Phe	Ser	Asp	Phe	Val	Cys	Gln	Cys	Pro	Glu	Gly	Phe	Ala	
65				70					75					80		
Gly	Lys	Cys	Cys	Glu	Ile	Asp	Thr	Arg	Ala	Thr	Cys	Tyr	Glu	Asp	Gln	
			85					90					95			
Gly	Ile	Ser	Tyr	Arg	Gly	Thr	Trp	Ser	Thr	Ala	Glu	Ser	Gly	Ala	Glu	
		100					105					110				
Cys	Thr	Asn	Trp	Asn	Ser	Ser	Ala	Leu	Ala	Gln	Lys	Pro	Tyr	Ser	Gly	
		115				120						125				
Arg	Arg	Pro	Asp	Ala	Ile	Arg	Leu	Gly	Leu	Gly	Asn	His	Asn	Tyr	Cys	
130						135					140					
Arg	Asn	Pro	Asp	Arg	Asp	Ser	Lys	Pro	Trp	Cys	Tyr	Val	Phe	Lys	Ala	
145				150					155					160		
Gly	Lys	Tyr	Ser	Ser	Glu	Phe	Cys	Ser	Thr	Pro	Ala	Cys	Ser	Glu	Gly	
			165					170					175			
Asn	Ser	Asp	Cys	Tyr	Phe	Gly	Asn	Gly	Ser	Ala	Tyr	Arg	Gly	Thr	His	
		180					185					190				
Ser	Leu	Thr	Glu	Ser	Gly	Ala	Ser	Cys	Leu	Pro	Trp	Asn	Ser	Met	Ile	
		195					200					205				

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Leu Ile Gly Lys Val Tyr Thr Ala Gln Asn Pro Ser Ala Gln Ala Leu
210                215                220
Gly Leu Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Gly Asp Ala Lys
225                230                235                240
Pro Trp Cys His Val Leu Lys Asn Arg Arg Leu Thr Trp Glu Tyr Cys
                245                250                255
Asp Val Pro Ser Cys Ser Thr Cys Gly Leu Arg Gln Tyr Ser Gln Pro
                260                265                270
Gln Phe Glu Ile Lys Gly Gly Leu Phe Ala Asp Ile Ala Ser His Pro
275                280                285
Trp Gln Ala Ala Ile Phe Ala Lys His Arg Arg Ser Pro Gly Glu Arg
290                295                300
Phe Leu Cys Gly Gly Ile Leu Ile Ser Ser Cys Trp Ile Leu Ser Ala
305                310                315                320
Ala His Cys Phe Gln Glu Arg Phe Pro Pro His His Leu Thr Val Ile
                325                330                335
Leu Gly Arg Thr Tyr Arg Val Val Pro Gly Glu Glu Glu Gln Lys Phe
340                345                350
Glu Val Glu Lys Tyr Ile Val His Lys Glu Phe Asp Asp Asp Thr Tyr
355                360                365
Asp Asn Asp Ile Ala Leu Leu Gln Leu Lys Ser Asp Ser Ser Arg Cys
370                375                380
Ala Gln Glu Ser Ser Val Val Arg Thr Val Cys Leu Pro Pro Ala Asp
385                390                395                400
Leu Gln Leu Pro Asp Trp Thr Glu Cys Glu Leu Ser Gly Tyr Gly Lys
405                410                415
Asp Glu Ala Leu Ser Pro Phe Tyr Ser Glu Arg Leu Lys Glu Ala His
420                425                430
Val Arg Leu Tyr Pro Ser Ser Arg Cys Thr Ser Gln His Leu Leu Asn
435                440                445
Arg Thr Val Thr Asp Asn Met Leu Cys Ala Gly Asp Thr Arg Ser Gly
450                455                460
Gly Pro Gln Ala Asn Leu His Asp Ala Cys Gln Gly Asp Ser Gly Gly
465                470                475                480
Pro Leu Val Cys Leu Asn Asp Gly Arg Met Thr Leu Val Gly Ile Ile
485                490                495
Ser Trp Gly Leu Gly Cys Gly Gln Lys Asp Val Pro Gly Val Tyr Thr
500                505                510
Lys Val Thr Asn Tyr Leu Asp Trp Ile Arg Asp Asn Met Arg Pro
515                520                525

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&lt;210&gt; 2

&lt;211&gt; 527

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 2

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Ser Tyr Gln Val Ile Cys Arg Asp Glu Lys Thr Gln Met Ile Tyr Gln
1                5                10                15
Gln His Gln Ser Trp Leu Arg Pro Val Leu Arg Ser Asn Arg Val Glu
20                25                30
Tyr Cys Trp Cys Asn Ser Gly Arg Ala Gln Cys His Ser Val Pro Val
35                40                45
Lys Ser Cys Ser Glu Pro Arg Cys Phe Asn Gly Gly Thr Cys Gln Gln
50                55                60
Ala Leu Tyr Phe Ser Asp Phe Val Cys Gln Cys Pro Glu Gly Phe Ala
65                70                75                80
Gly Lys Cys Cys Glu Ile Asp Thr Arg Ala Thr Cys Tyr Glu Asp Gln

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## 90

$$\begin{array}{ll} \langle 210 \rangle & 3 \\ \langle 211 \rangle & 527 \end{array}$$

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3

```

Ser Tyr Gln Val Ile Cys Arg Asp Glu Lys Thr Gln Met Ile Tyr Gln
 1      5      10      15
Gln His Gln Ser Trp Leu Arg Pro Val Leu Arg Ser Asn Arg Val Glu
      20      25      30
Tyr Cys Trp Cys Asn Ser Gly Arg Ala Gln Cys His Ser Val Pro Val
      35      40      45
Lys Ser Cys Ser Glu Pro Arg Cys Phe Asn Gly Gly Thr Cys Gln Gln
      50      55      60
Ala Leu Tyr Phe Ser Asp Phe Val Cys Gln Cys Pro Glu Gly Phe Ala
      65      70      75      80
Gly Lys Cys Cys Glu Ile Asp Thr Arg Ala Thr Cys Tyr Glu Asp Gln
      85      90      95
Gly Ile Ser Tyr Arg Gly Thr Trp Ser Thr Ala Glu Ser Gly Ala Glu
      100      105      110
Cys Thr Asn Trp Asn Ser Ser Ala Leu Ala Gln Lys Pro Tyr Ser Gly
      115      120      125
Arg Arg Pro Asp Ala Ile Arg Leu Gly Leu Gly Asn His Asn Tyr Cys
      130      135      140
Arg Asn Pro Asp Arg Asp Ser Lys Pro Trp Cys Tyr Val Phe Lys Ala
      145      150      155      160
Gly Lys Tyr Ser Ser Glu Phe Cys Ser Thr Pro Ala Cys Ser Glu Gly
      165      170      175
Asn Ser Asp Cys Tyr Phe Gly Asn Gly Ser Ala Tyr Arg Gly Thr His
      180      185      190
Ser Leu Thr Glu Ser Gly Ala Ser Cys Leu Pro Trp Asn Ser Met Ile
      195      200      205
Leu Ile Gly Lys Val Tyr Thr Ala Gln Asn Pro Ser Ala Gln Ala Leu
      210      215      220
Gly Leu Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Gly Asp Ala Lys
      225      230      235      240
Pro Trp Cys His Val Leu Lys Asn Arg Arg Leu Thr Trp Glu Tyr Cys
      245      250      255
Asp Val Pro Ser Cys Ser Thr Cys Gly Leu Arg Gln Tyr Ser Gln Pro
      260      265      270
Gln Phe Glu Ile Lys Gly Gly Leu Phe Ala Asp Ile Ala Ser His Pro
      275      280      285
Trp Gln Ala Ala Ile Phe Ala Lys His Arg Arg Ser Pro Gly Glu Arg
      290      295      300
Phe Leu Cys Gly Gly Ile Leu Ile Ser Ser Cys Trp Ile Leu Ser Ala
      305      310      315      320
Ala His Cys Phe Gln Glu Arg Phe Pro Pro His His Leu Thr Val Ile
      325      330      335
Leu Gly Arg Thr Tyr Arg Val Val Pro Gly Glu Glu Glu Gln Lys Phe
      340      345      350
Glu Val Glu Lys Tyr Ile Val His Lys Glu Phe Asp Asp Asp Thr Tyr
      355      360      365
Asp Asn Asp Ile Ala Leu Leu Gln Leu Lys Ser Asp Ser Ser Arg Cys
      370      375      380
Ala Gln Glu Ser Ser Val Val Arg Thr Val Cys Leu Pro Pro Ala Asp
      385      390      395      400
Leu Gln Leu Pro Asp Trp Thr Glu Cys Glu Leu Ser Gly Tyr Gly Lys
      405      410      415
His Glu Ala Leu Ser Pro Phe Tyr Ser Glu Arg Leu Tyr Glu Ala His
      420      425      430
Val Arg Leu Tyr Pro Ser Ser Arg Cys Thr Ser Gln His Leu Leu Asn

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## 568.1D1.TXT

```

      435              440              445
Arg Thr Val Thr Asp Asn Met Leu Cys Ala Gly Asp Thr Arg Ser Gly
  450              455              460
Gly Pro Gln Ala Asn Leu His Asp Ala Cys Gln Gly Asp Ser Gly Gly
  465              470              475              480
Pro Leu Val Cys Leu Asn Asp Gly Arg Met Thr Leu Val Gly Ile Ile
      485              490              495
Ser Trp Gly Leu Gly Cys Gly Gln Lys Asp Val Pro Gly Val Tyr Thr
      500              505              510
Lys Val Thr Asn Tyr Leu Asp Trp Ile Arg Asp Asn Met Arg Pro
      515              520              525

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<210> 4  
 <211> 290  
 <212> DNA  
 <213> Homo sapiens

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<400> 4
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cagactgtac ccatccagcc gctgcacatc acaacattta cttaacagaa cagtcaccga 120
caacatgctg tgtgctggag acactcggag cggcggggccc caggcaaact tgcacgacgc 180
ctgccagggc gattcggggag gccccctggt gtgtctgaac gatggccgca tgactttggt 240
gggcatcatc agctggggcc tgggctgtgg acagaaggat gtcccgggtg          290

```

<210> 5  
 <211> 290  
 <212> DNA  
 <213> Homo sapiens

```

<400> 5
ctacggcaag gacgaggcct tgtctccttt ctattcggag cggctgaagg aggctcatgt 60
cagactgtac ccatccagcc gctgcacatc acaacattta cttaacagaa cagtcaccga 120
caacatgctg tgtgctggag acactcggag cggcggggccc caggcaaact tgcacgacgc 180
ctgccagggc gattcggggag gccccctggt gtgtctgaac gatggccgca tgactttggt 240
gggcatcatc agctggggcc tgggctgtgg acagaaggat gtcccgggtg          290

```

<210> 6  
 <211> 290  
 <212> DNA  
 <213> Homo sapiens

```

<400> 6
ctacggcaag gaggaggcct tgtctccttt ctattcggag cggctgaagg aggctcatgt 60
cagactgtac ccatccagcc gctgcacatc acaacattta cttaacagaa cagtcaccga 120
caacatgctg tgtgctggag acactcggag cggcggggccc caggcaaact tgcacgacgc 180
ctgccagggc gattcggggag gccccctggt gtgtctgaac gatggccgca tgactttggt 240
gggcatcatc agctggggcc tgggctgtgg acagaaggat gtcccgggtg          290

```

<210> 7  
 <211> 290  
 <212> DNA  
 <213> Homo sapiens

```

<400> 7
ctacggcaag catgaggcct tgtctccttt ctattcggag cggctgtatg aggctcatgt 60
cagactgtac ccatccagcc gctgcacatc acaacattta cttaacagaa cagtcaccga 120
caacatgctg tgtgctggag acactcggag cggcggggccc caggcaaact tgcacgacgc 180
ctgccagggc gattcggggag gccccctggt gtgtctgaac gatggccgca tgactttggt 240

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## 568.1D1.TXT

gggcatcatc agctggggcc tgggctgtgg acagaaggat gtcccgggtg 290  
<210> 8  
<211> 23  
<212> DNA  
<213> Homo sapiens  
  
<400> 8  
ctacggcaag gacgaggcct tgt 23  
  
<210> 9  
<211> 23  
<212> DNA  
<213> Homo sapiens  
  
<400> 9  
ctacggcaag gaggaggcct tgt 23  
  
<210> 10  
<211> 26  
<212> DNA  
<213> Homo sapiens  
  
<400> 10  
cggagcggct gtatgaggct mcatgt 26